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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|------------------|
| 10/643,671  | 08/19/2003  | Masashi Yoshida      | 490376-003          | 5753             |
| 27805   | 7590        | 04/09/2004           | EXAMINER            |                  |
| THOMPSON HINE L.L.P.<br>2000 COURTHOUSE PLAZA , N.E.<br>10 WEST SECOND STREET<br>DAYTON, OH 45402 |             |                      | HASAN, MOHAMMED A   |                  |
|   |             |                      | ART UNIT            | PAPER NUMBER     |
|   |             |                      | 2873                |                  |

DATE MAILED: 04/09/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                                      |   |  |
|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/643,671 | <b>Applicant(s)</b><br>YOSHIDA, MASASHI |  |
|                              | <b>Examiner</b><br>Mohammed Hasan    | <b>Art Unit</b><br>2873                 |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5 and 9 is/are rejected.
- 7) ☒ Claim(s) 3, 4, 6 - 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/19/2003</u> . | 6) <input type="checkbox"/> Other: ____.  |

## **DETAILED ACTION**

### ***Priority***

1. Receipt of acknowledged of papers submitted under 35 U.S.C. 119 (a) – (d), which papers have placed of record in the file.

### ***Oath/Declaration***

2. Oath and declaration filed on 8/19/2003 is accepted.

### ***Information Disclosure Statement***

3. The prior art documents submitted by applicant in the Information Disclosure Statement filed on August 19, 2003 have all been considered and made of record (note the attached copy of form PTO – 1449).

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 5 and 9 are rejected under 35 U.S.C. 102 (e) as being anticipated by Nagahara (US 2002/0181120 A1).

Regarding claim 1, Nagahara discloses (refer to figure 1) a projection zoom lens system that projects onto a screen projection light from a light modulator (1) which includes a plurality of elements (e.g., DMD light modulator, paragraph 0067) and forms an image by changing directions of reflections of illuminating light from an illuminating optical system using the plurality of elements, the projection zoom lens system including first ( $G_{1A}$  and  $G_{1B}$ ), second ( $G_2$ ), third ( $G_3$ ), fourth ( $G_4$ ), and fifth lens group ( $G_5$ ) arranged in this order from the screen side, the fifth lens being a common lens group that disposed on the front side of the light modulator, transmits the illuminating light and the projection light and does not move during zooming, the first lens group being a focused lens group that moves in order to adjust a focus and does not move during zooming, the third lens being a zooming lens group and zooming effect is mainly produced by movement of this group and the second and fourth lens group being compensating lens group that mainly compensate aberrations by moving when zooming is carried out (paragraph 0036 – 0039).

Regarding claim 2, Nagahara discloses (refer to figure 1) the first lens group ( $G_{1A}$  and  $G_{1B}$ ) has a negative power, the second lens group ( $G_2$ ) has a positive refractive power, the third lens group ( $G_3$ ) has a positive refractive power, the fourth

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lens group ( $G_4$ ) has a negative refractive power, and fifth lens group ( $G_5$ ) has a positive refractive power (paragraph 0036).

Regarding claim 5, Nagahara discloses, the second, third, and fourth lens group ( $G_2$ ,  $G_3$  and  $G_4$ ) towards the screen when zooming is carried out from a wide-angle end to a telephoto end (as shown in figure 1).

Regarding claim 9, Nagahara discloses, the light modulator and the illumination optical system (paragraph 0040).

### ***Allowable Subject Matter***

5. Claims 3, 4 and 6 – 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter: The prior art fails to show the first and fourth groups include an aspherical lens, Sequentially from the screen side , a positive lens that is convex on the screen side, a double – concave negative lens and a positive lens that is convex on the light modulator side, a focal length  $f_w$  of the projection lens system at the wide-angle end and a focal length  $f_3$  of the third lens group satisfy the following condition  $1.4 < f_3 / f_w < 2.1$  and a focal length  $f_t$  of the projection lens system at the telephoto end , and a distance  $T_4$  of the fourth lens group traveling during zooming satisfy the following condition  $.75 < T_4x$

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$f_t / f_w < 6.6$  , and at least one of the first, second and fourth lens groups includes an aspherical lens.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The closest prior art

Nagahara (6,580,564 B2) discloses wide-angle zoom lens and projection –type display unit using it.

### ***Conclusion***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammed Hasan whose telephone number is (571) 272-2331. The examiner can normally be reached on M-TH, 7:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Georgia Epps can be reached on (571) 272- 2328. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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March 23, 2004



Georgia Epps  
Supervisory Patent Examiner  
Technology Center 2800